

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

**Historical trends in protection of technology
in developed countries and their relevance
for developing countries**



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Study prepared by Dr. Alberto Bercovitz-Rodriguez
at the request of the UNCTAD secretariat

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FOREWORD

The present study has been prepared by Dr. Alberto Bercovitz-Rodriguez at the request of the UNCTAD secretariat in the context of the secretariat's on-going programme of work on the economic, commercial and developmental aspects of industrial property protection. The latest UNCTAD resolution relevant to this work is resolution 32 (VII) of the Committee on Transfer of Technology, which invites the UNCTAD secretariat to continue its work on the economic, commercial and developmental aspects of the industrial property system in the transfer of technology to developing countries.

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INTRODUCTION - NATIONAL INTERESTS AND PATENT LAW

1. With the passage of time, patent law has undergone a major change which is affecting the very function of patents. Since it is on this function that patent legislation must be based, it is clearly important not only to analyse the objectives pursued by patent legislation, but also, more particularly, to identify the factors determining the direction of its change.

2. The present study seeks to demonstrate that the function of patents, and therefore of patent legislation, has been and still is determined basically by the technological and industrial interests of the country enacting the legislation. This principle has some important consequences which may be summarized as follows:

(a) Patent law does not imply the existence of rules to govern patents which must be the same everywhere and at all times. On the contrary, there is a large variety of options in this area and legislation adopted by different countries at different times may therefore differ on essential points;

(b) Patent law may undergo substantial changes in any given country, to adapt it to that country's changing interests in the technological and industrial fields; and,

(c) The content of patent law may vary among countries, especially when their interests in the technological and industrial fields differ.

Chapter I

SOME ASPECTS OF THE EVOLUTION OF PATENT LAW IN THE COUNTRIES OF WESTERN EUROPE

A. Protection of inventors and introducers 1/

3. In Europe, the birthplace of patent law, patents arose as an instrument for promoting and encouraging technological and industrial progress in the country granting them, without regard either to the interests of the actual inventor or of those of other countries. The aim pursued was the introduction into the national territory of new technology and its industrial exploitation there. Initially, therefore, no distinction was made between patents of invention and patents of importation. All patents were patents of importation, although they were purportedly granted to persons called inventors. Whether or not the invention had been previously known abroad was of no significance. What mattered was that it should be unknown in the country granting the patent.

4. In England, for example, although the Statute of Monopolies of 1623/4 provided for the granting of patents "to the true and first inventor" or inventors, a person who merely introduced an invention into the country was regarded as this true and first inventor. The traditional English doctrine recognized this, affirming as it did, for example, that the purpose of patent law was to encourage the development of new local industries, which was why the introducer of an invention was always treated as the "true and first inventor". 2/ As late as 1893, the judicial ruling given in the case of Moser v. Marsden 3/ confirmed that the holder of the patent was the true and first inventor within the meaning of the patent law, whether he actually invented or whether he merely imported a foreign invention.

5. The same concept - that the introducer of the invention into the country was the inventor - is also to be found in the first French patent law, the Decree of the National Constituent Assembly of 31 December 1790 (7 January 1791 by modern reckoning) concerning the authors of useful discoveries. Article 1, paragraph 3, provides as follows: "Whoever first imports into France a useful discovery shall enjoy the same advantages as if he had been its inventor". However, paragraph 9 of the same article provides that "the utilization of patents granted for a discovery imported from a foreign country may not extend beyond the period fixed in that country for its utilization by the first inventor". 4/

6. There was thus a transition from complete equivalence between inventor and introducer to a distinction between patents of invention and patents of importation. The latter, granted to those who merely introduced into the country inventions known abroad, persisted in France up to the Act of 5 July 1844, and continued in Spain until they were abolished by the new patent act of 20 March 1986.

B. Absolute and relative novelty

7. Until recently, in many European countries the standard of novelty required for the patentability of an invention was far from being absolute and depended to a large extent on the perceived usefulness of the invention for local industry. For example, the British Patents Act of 1949, which remained

in force until it was replaced by the new Patents Act of 1977, required only that the invention should be new in the United Kingdom (section 32.1.(e)). Likewise, in the Federal Republic of Germany, inventions were not required to have absolute novelty in order to be patentable until the enactment of the patent law of 16 December 1980. According to the previous legislation of 2 January 1968, an invention was not considered new only "if, at the time of the application, it has already been described in such a fashion in publications printed within recent years, or has already been used in the country in such a widely known manner, that utilization of the invention by others experienced in the field seems possible" (section 2). This meant that the novelty of an invention was not impaired either by printed publication dating from more than a hundred years before or by examples of utilization of the invention that had occurred abroad or were not widely known about within the country. Nowadays, in the States members of the European Community, a requirement of absolute novelty has been imposed as one of the consequences entailed by the establishment of European patents, (which were instituted by the Convention of Munich on the Grant of European Patents, of 5 October 1973).

C. Exploitation of patents within the national territory 5/

8. In European countries, it was for a long time a priority objective of patent law to ensure that the inventions patented in the country were actually exploited within the national territory. Patents were in fact devised as incentives for the development of new industries in the patent-granting country. It was generally believed that the privilege granted would be of no value to the country unless it was locally exploited.

9. However, with the growth in international trade, it was realized that enterprises could benefit from a patent grant without having to exploit the patented invention in the country granting it, but by importing from abroad the products protected by the patent. The response of national legislation to this practice was to establish that the use of a patent as an import monopoly would constitute a ground for forfeiture of the patent. For example, the French Act of 5 July 1844 established as a ground for forfeiture of a patent the fact that its holder had imported into France articles manufactured abroad which were similar to those protected by the patent (art. 32, para. 3). In the United Kingdom, section 27 of the Patents Act of 1907 provided that a patent could be revoked if the holder exploited it exclusively or principally abroad. A similar provision, but of more restricted application, was maintained in the successive Patent Acts of 1919, 1928 and 1932. A similar reasoning was also followed in Germany leading to the adoption of the patent laws of 1877 and 1881 (specifically para. 11 of these laws). 6/

10. Similarly, failure to exploit the patented invention within the national territory constituted a ground for forfeiture of the patent under the earliest legislation on the subject. In France, article 16 of the Decree of the National Constituent Assembly of 31 December 1790 (7 January 1791 by modern reckoning) concerning the inventors of useful discoveries stipulated that: "Any inventor who, within two years of the date of granting of the patent, has not put his discovery into effect and has given no good reasons for his inactivity shall be divested of his patent". In Spain, too, article 24 of the Royal Decree of 14 October 1820 likewise provided that "the inventor, improver or introducer shall cease to be considered as proprietors if they let two years elapse without putting into operation their invention, refinement or improvement".

11. In short, during the 19th century and the first half of the 20th century not only was it obligatory to exploit the patent, on pain of its losing its validity, but it was also forbidden, subject to the same penalty, to utilize the patent as a means of securing an import market for one's products. However, since then, the legislation of most of these countries has undergone a radical change. The provisions prohibiting the utilization of a patent as a means of securing an import monopoly, have been replaced by new ones which confer on the holder of the patent, as one of his basic entitlements, the exclusive right to import the products obtained through the patented invention. 7/

12. This change of position has, moreover, been reflected, to some extent, in the Paris Convention for the Protection of Industrial Property, through whose successive revisions this evolution may be observed. The original wording of 20 March 1883 provided for the obligation to exploit the patent within the country, but also contained a provision establishing that the importation of patented products was not in itself a ground for forfeiture (art. 5). In the Washington revision of 2 June 1911, the possibility of forfeiture for non-working was still further limited. The patent could be forfeited only for failure, without good reason, to exploit locally the patent within three years from the date of filing of the application for it (art. 5, second para.).

13. In the revision adopted at the Hague on 6 November 1925, forfeiture on the grounds of non-exploitation was made conditional upon the prior granting of a compulsory licence, and although the time during which it could remain unexploited without good cause was maintained at three years, it was counted from the date of granting of the patent (art. 5, second, third and fourth paras.). In the London revision of 2 June 1934 it was stipulated that compulsory licences for failure to exploit the patent could be granted only for non-working without legitimate reasons for three years from the date of granting of the patent, and that forfeiture could be declared only after a lapse of two years from the granting of the first compulsory licence (art. 5A). Finally, the revision adopted at Lisbon on 31 October 1958, which is still in force, introduced a technical improvement in the wording of article 5A, specifying in addition that the time which must elapse before compulsory licences were granted was four years from the date of application for the patent or three years from the date of its granting, whichever period last expired, and that a compulsory licence for failure to exploit could not be exclusive, nor be transferred independently of the enterprise or part thereof exploiting the licence granted.

Chapter II

THE INDUSTRIAL PROPERTY PROTECTION OF CHEMICAL AND PHARMACEUTICAL INVENTIONS 8/

14. Of particular significance in the evolution of European legislation on the protection of industrial property is the history of protection of chemical and pharmaceutical inventions, notably under German patent law. The developments that have occurred in this area are of interest for a number of reasons. First, particular importance is attached in many countries to the problems posed by the protection of chemical and pharmaceutical inventions and international debate on this issue has not yet been exhausted. Secondly, much attention has always been paid in this area to the German legal system, with regard both to its legislation and jurisprudence and, more particularly, to its doctrinal basis. Thirdly, an analysis of the developments in this sector provide a striking example of how certain rules that originate for the clear purpose of protecting industrial production on the national territory come at a later stage to be used as an instrument for securing export monopolies.

A. The patentability of substances and processes

15. As is well known, German legislation prohibited the patenting of inventions of new chemical and pharmaceutical substances until the prohibition was abolished by the Patents Act of 4 September 1967. For nearly a century prior to that - from the enactment of the first patent law on 25 May 1877 - only inventions of chemical and pharmaceutical production processes could be patented. Section 1 (para. 2, sub-para. 2) of the Act of 1877, which was carried over into successive patent acts until its deletion in 1967, excluded from patentability: "Inventions of foods, stimulants and medicaments, as also of substances produced by chemical means, provided that the inventions do not concern a specific process for the manufacture of the products". The reasons invoked in support of the ban on patenting medicaments was similar to the one that has been used in other countries, namely, concern to obviate difficulties in obtaining medicines or unwarranted price rises that might result from a monopoly. Another aim was also to obviate possible abuse of patents in advertisements in order to promote sales of medicaments.

16. The justification provided for prohibiting by law the patenting of inventions of substances obtained by chemical means is also of particular significance. In the original Bill (for the Act of 1877) it was laid down that inventions of foods, stimulants and medicaments could not be patented, but there was no provision against patenting chemicals. It was in fact a petition submitted to Parliament (the Reichstag) in March 1877 - two months before the promulgation of the Act - by the Board of Directors of the Deutsche Chemische Gesellschaft (German Chemical Company) which prompted the inclusion of the prohibition in the Act. 2/ The petition contained the following passage:

"With regard to the granting of patents for chemical inventions, the principle should be maintained that it is solely and exclusively the method of manufacture of a chemical product that can be the subject of the patent, and not the product itself." This suggestion was justified

as follows in the petition: "A chemical product can be obtained by various methods and from different starting materials; the grant of a patent for the product itself would prevent better processes discovered subsequently from being brought into effect in the interest of the public and of the inventors."

The prohibition was thus introduced to promote the development of the chemical industry by stimulating process inventions rather than product inventions.

17. Years later, in studying the draft revision which was to result in a new Act (of 7 April 1891), the German chemical industry maintained its opposition to the patentability of chemical substances. Thus, at the general meeting of the Association for the Protection of the Interests of the German Chemical Industry, held at Bremen in 1890, it was stated in the report prepared by the Patents Committee that the Committee, in studying the draft revision, had considered and rejected the possibility of making a substance patentable. "Such comprehensive protection", said the report, "has, however, always been considered by the German chemical industry as an obstacle prejudicial to the discovery of new and improved processes and has been energetically opposed". 10/

18. As mentioned above, this prohibition was maintained until the Act of 4 September 1967 abolished it, somewhat unexpectedly and largely in response to some peculiar arguments. The amendment was not provided for in the Government's draft and was introduced by the Law Committee of the Bundestag. 11/ Basically, the argument adduced was that applicants for patents for inventions of substances which were not legally patentable tried to patent all the imaginable manufacturing processes with a view to achieving a virtual monopoly over the substance. This manner of proceeding resulted in an excessive workload for the Patents Office (Patentamt). Hence, it was argued, the removal of the prohibition would lighten the work of the Patentamt, and that was precisely the basic purpose of the new Act. 12/ In addition to these arguments, it was asserted that the prohibition was no longer justified in the present state of the German economy, and also that it was not admissible under the European Convention for the unification of Certain Features of Patent Law, signed by the Federal Republic of Germany.

19. It appears that the underlying reason for this change in German legislation was the changed circumstances of the chemical industry. At the beginning of the century, in view of the limited knowledge that existed in major sectors of chemistry, the large chemical firms could achieve a monopoly of new substances by patenting all the imaginable processes for obtaining them, since it had the necessary means for conducting this kind of research. Nowadays, knowledge in the chemical field has increased to such an extent that it is no longer possible to patent all the diverse processes for obtaining a given product, so the only way for the large firms to secure a monopoly over new substances is to allow patentability of the substance itself. Moreover, since, owing to the necessary concentration of research facilities, inventions of new substances take place almost exclusively in the large firms, they have been able in this way to secure a strengthened position in the market for themselves. 13/

B. The scope of protection afforded by patents for chemo-pharmaceutical production processes

20. Other well-known rules - those extending the scope of protection of the process patent to the product directly obtained, and the rule shifting the burden of proof so that it must be shown, when a substance is new, that it has been obtained by a process different from the one patented - appear to have also been established to protect the German chemical industry vis-à-vis imports of chemical substances produced abroad, specifically in Switzerland.

21. Initially, German jurisprudence interpreted in a strict sense the provisions prohibiting the patenting of inventions of substances obtained by chemical means, ruling that the process patent did not confer an exclusive right to market the product obtained by the patented process when that product had been imported from abroad. This interpretation had some negative effects on the German industry since, taking advantage of the non-patentability of chemical inventions in other countries, especially Switzerland, factories were set up in these countries to exploit processes patented in Germany, notably for the manufacture of synthetic dyes, in order then to export the products obtained to the German market. The process patents did not give the German industrialists any legal means for preventing the import of such products. 14/

22. The Association for the Protection of the Interests of the German Chemical Industry took steps to deal with the problem as early as 1879 at its Congress held in Baden-Baden, where it adopted by a large majority a resolution stating:

"The meeting considers that the term subject of the invention should be held to mean not only a patented product, but also any product that has been manufactured by a patented process." 15/

23. The question was not however resolved. Therefore, in 1885, in pursuance of a decision taken at the General Meeting in Heidelberg, the Association addressed a petition to the Chancellor of the Reich asking him to adopt measures for instituting effective protection of the holders of German chemical patents against foreign competition and also asking him to organize an enquiry into the effects of the Patents Act on the chemical industry and the amendments that would be desirable to the Patents Act in the interests of that industry. 16/ The situation was considered so serious that in 1886 the Association of German Synthetic Dye Factories (Vereinigung Deutscher Teerfabriken) asked the Chancellor of the Reich for an immediate change to be made through an emergency law. 17/

24. The upshot of these demands was the inclusion of two new provisions in the Patents Act of 7 April 1891. The following sentence was added to Section 4: "If the patent has been granted for a process, its effects extend also to products strictly obtained by that process". Another change made was the inclusion in Section 5, paragraph 2 of the clause called "shifting of the burden of proof", which provided that "if the subject of the invention concerned is a process for the manufacture of a new substance, it shall be considered, failing proof of the contrary, that any substance having the same characteristics has been manufactured by the process patented".

25. Satisfaction was thus given to the demands which were put forward to protect the German chemical industry and whose object was that the exploitation of production process inventions by firms in German territory should not have to face competition from substances imported from abroad, more particularly from Switzerland. To afford the German industry still further protection, a trade agreement was signed early in the century with Switzerland exempting from customs duties aniline and other dyes imported into Germany from Switzerland. However, Germany reserved the right to demand payment of customs duties for chemical products "if Switzerland had not amended before 31 December 1907 its legislation on patents so as to provide that articles of the class referred to and their like or the processes for their manufacture should be patentable where the invention was a new one". 18/

26. In furtherance of the provisions of this agreement, and taking into account the need to protect, to the fullest extent compatible with it, the Swiss chemical industry, the new Swiss Act of 21 June 1907 firstly established the patentability of chemical processes, and secondly, so as to reduce to a minimum the effects of that patentability, stipulated that patents for inventions of manufacturing processes for chemical substances could cover only a single process starting from strictly defined substances and leading to a single end-product. It was thus made extremely difficult - to the advantage of the Swiss chemical industry - to protect chemical inventions, since the Act prohibited the usual practice of patenting a series of processes. 19/

Chapter III

RECENT TRENDS IN LEGISLATIVE PRACTICES AND REASONS UNDERLYING THEM

A. The significance of recent trends

27. The way in which the patents system has evolved in the countries of Western Europe reflects the changes gradually introduced into the system through a long period, as the economic and technological level of those countries changed. Whereas the system was originally designed as a means of fostering the technological and industrial progress of the State granting the patent, with economic self-sufficiency in view, there has been a continuous trend towards "internationalizing" its functions so as to enable owners of inventions to exploit them not only at the national but also at the international level. In short, the trend has moved away from patent legislation devised for and suited to the strictly national market towards legislation which will facilitate the exploitation of the protected inventions on the international market.

28. It is this trend which underlies the changes described above. The grant of the right to hold a patent only to the inventor and not to the introducer, and the insistence on absolute novelty at the world level, have tended to result in all patents for a given invention belonging to the same inventor. At the same time, the notable weakening of the obligation to work the patent in the country granting it has facilitated the exploitation of the patented invention in a number of national markets through imports rather than through local production. This has in turn led to patents being utilized for securing exclusive rights over export markets. Moreover, rules such as those extending the protection of the patented manufacturing process to the product directly obtained by that process or those on the reversal of the burden of proof for patents concerning processes that result in new products, which were originally devised to protect national industries by blocking imports, came to be used for the strengthening of exclusive import rights and thus for the promotion of exports.

B. Analysis of the background to the trend

29. The reasons for this trend are obvious. In an initial phase, patents were used in European countries as a means for achieving industrialization and technological progress in the country granting the industrial property rights. It is important to note that this phase broadly coincided with the industrial revolution in Europe. At a later stage, steps began to be taken to make it increasingly easy for the technology generated by firms within the country itself to be also exploited abroad on the international market. In other words, once the country had succeeded in acquiring a technological potential that needed to be exploited on a wider market than the national one, the rules of patent law were placed at the service of this new policy.

30. This shift was, of course, made inevitable by far-reaching changes that have had and are continuing to have major repercussions upon markets and upon the generation and dissemination of technology. The remarkable improvements in transport and communications and in production systems have contributed to

the globalization of markets. Manufacturing no longer has to be undertaken locally; on the contrary, it is far more profitable to have a single production centre from which to supply extensive geographical areas belonging to different States - sometimes indeed to supply the entire planet. Moreover, the internationalization of markets is matched by that of firms, which have become multinational.

31. At the same time, technological research is becoming ever more expensive and its results, once made public, are disseminated very rapidly throughout the world. A number of important consequences follow from these developments. The first is that research can be cost-effective only if its results are exploited at the international level. The second is that the only way to make that exploitation profitable is to make it exclusive, which means that patents are needed since, without them, the new technologies, in view of their rapid dissemination, can be copied. And lastly, account must be taken of the fact that the pursuit of profitability will generally preclude exploitation of the technology at the production level from taking place in all the countries where it is planned to market the products obtained.

C. The new functions of patents at the international level

32. Patent legislation in the developed countries of Europe - and of almost all other developed countries - is increasingly being used today to promote technological progress and to facilitate the exploitation of inventions throughout the world. Obviously, the various national laws enacted in pursuance of this global objective cannot in themselves ensure its attainment, precisely because they are national. To achieve the end sought, Governments are trying to elaborate, or further strengthen, legal instruments with international scope, among which particular mention must be made of the Paris Convention for the Protection of Industrial Property, the Patent Co-operation Treaty (PCT), signed at Washington in 1970, and the Convention on the European Patents, signed at Munich in 1973. The last two are intended to facilitate the securing of patents for the same invention by a single patentee in a number of different countries, and their provisions therefore include the requirement of absolute novelty and the grant of the patent rights to the inventor.

33. For its part, the Paris Convention is subject to increasing strains resulting from the new orientations of patent laws in developed countries. The Paris Convention originated, and long remained, an instrument in whose application the developed countries played a major role. The principle of national treatment enshrined in the Convention was considered appropriate, in view of the similar tenor of the national laws. However, with the increasing concern for facilitating exploitation of patented inventions at the international level, modifications were introduced into the Convention so as to strengthen national legislative provisions on such matters as priority for Union countries or the obligation to exploit the patent. There is also a clear tendency among developed countries to increase the unifying and harmonizing role of the Convention, which has so far been limited. Such an approach would, however, be ill-suited to the circumstances of the less developed countries, whose fundamental interest is to stimulate their industrial and technological progress and, for this purpose, preserve their freedom to adapt their industrial property régime to their economic needs.

34. There is thus a growing tension between two different concepts of the function of patents, representing two different phases in the evolution of patent laws. The developed countries view patents as an instrument for technological competitiveness at world-wide level, whereas the developing countries assign to them the same objective as did the developed countries themselves at a prior stage in their industrial development, namely the stimulation of national technological and industrial progress. Thus, while the developed countries are seeking to universalize rules specific to their own patent law at the current stage of development, developing countries are trying to maintain the same rules that were in force in the developed countries at earlier stages. This is the logical consequence of their differing levels of economic and technological development. These differences will undoubtedly mark the future evolution of patent legislation, both domestically and internationally.

Notes

1/ See A. Bercovitz, "Patentes de introducción" in the Nueva Enciclopedia Jurídica, Editor F. Seix (in press).

2/ See Halsbury's Laws of England, Second Edition under the general editorship of the Right Honourable the Viscount Hailsham, Vol. XXIV, Butterworth & Co., (Publishers), Ltd., London 1937, p. 583, No. 1111. See also a similar statement in the same work, p. 561, No. 1071.

3/ Ibid., p. 583, n.(in fine), citation of L.J. Lindley.

4/ For text of this decree see DUVERGIER, J.B. Collection Complète des Lois. Décrets, Ordonnances, Réglements et Avis du Conseil d'Etat, Paris, A. Guyot et Scribe, Librairie-Editeurs 1824, Vol. II, p. 158 F (specifically p. 159).

5/ See A. Bercovitz, "La obligación de explotar las patentes y la reforma del derecho de patentes español", in La obligación de explotar las patentes en España y en Iberoamérica, Ed. Montecorvo, Madrid 1978, pp. 371 F.F. (specifically pp. 371-379).

6/ See Joachim Bussmann, Die patentrechtliche Zwangslizenz, Frankfurt-am-Main (1975), p. 31.

7/ On this point see, for example, the French Act of 13 July 1978 (art. 29), the British Act of 1977 (section 60) or the Spanish Act of 1986 (art. 50).

8/ See A. Bercovitz "La patentabilidad de las invenciones farmacéuticas", in A. Bercovitz (ed.) La protección jurídica de las invenciones y la industria químico-farmacéutica, E. Montecorvo, Madrid 1974, pp. 124 F.F. (specifically pp. 178-192 and 218-222).

9/ See texts reproduced in von Kreisler, GRUR 1951, pp.534 and 535; PECHMANN, GRUR 1957, p. 264; Hermann Schwanhaussner, Stoff und Verfahrensschutz chemischer Erfindungen, Carl Heymanns Verlag KG, Köln-Berlin-Bonn-München 1962, p. 35; Paul A. Zimmermann, GRUR 1966, pp. 539 F.F. (specifically p. 540) and by the same author, Patentwesen in der Chemie (Ursprünge, Anfänge, Entwicklung), Badische Anilin & Sodafabrik AG, Ludwigshafen-am-Rhein 1969, p. 36.

10/ See von Kreisler, op. cit. (footnote 8 above) p. 534 and R. Weidlich, GRUR 1951, p. 551.

11/ See Karl Nastelski in Eduard Reimer, Patentgesetz und Gebrauchsmustergesetz (Systematischer Kommentar), 3 erweiterte Auflage, Carl Heymanns Verlag KG, Köln-Berlin-Bonn-München 1968, p. 127, para. 1, note 91. The report can also be found in Albrecht Krieger, Das neue Patent und Warenzeichenrecht, Carl Heymanns Verlag KG, Köln-Berlin-Bonn-München 1968, pp. 186 F.F. (specifically pp. 197 F.F.).

12/ It must be borne in mind that the reform was aimed above all at changing the procedure so as to expedite the granting of patents, since in 1966 there was a backlog of 271,000 applications awaiting examination. See Althammer, GRUR 1967, p. 394. See also Bercovitz "Nuevas leyes de patentes en Francia y en la República Federal de Alemania", Revista de Derecho Mercantil No. 108 (1968), pp. 309 F.F.

13/ See Klaus Brunne, Chemiepatente, VEB Deutscher Verlag für Grundstoffindustrie, Leipzig 1968, pp. 98-100.

14/ See Hans-Gunther Eggert, GRUR 1964, p. 592; Jörg Hahn, Der Schutz von Erzeugnissen patentierter Verfahren, Carl Heymanns Verlag KG, Köln-Berlin-Bonn-München 1968, pp. 13/14 and von Kreisler, op. cit. (footnote 8 above), p. 536.

15/ For text see Zimmermann, GRUR 1966, p. 541 and, by the same author, op. cit. (footnote 8 above) Patentwesen ..., p. 36. Hahn, op. cit. (footnote 13 above), p. 14.

16/ See Zimmermann, Patentwesen ... (cited in footnote 8 above) p. 39. The petition is also mentioned by Hahn, op. cit. (footnote 13 above), p. 14, and von Kriesler, op. cit. (footnote 8 above), p. 536.

17/ See Zimmermann ... (cited in footnote 8 above), p. 39.

18/ See R. Weidlich Blum, Das schweizerische Patentrecht, Verlag Stämpfli & Cie., Bern 1934, Vol. I, p. 116.

19/ See R. Weidlich Blum, op. cit. p. 117 and "A propos de la revision de la loi suisse sur les brevets" in La propriété industrielle, 1906, pp. 119 F.F. (specifically p. 120).

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